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Serial Number: 10/820,561  
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Applicant: Tong Zhang  
Appn. Title: Single-Mode Operation and Frequency Conversions for Solid-State Lasers  
Examiner: Armando Rodriguez / GAU 2828

Mailed on February 10, 2010  
Salt Lake City, UT 84115

COMMISSIONER FOR PATENTS  
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Sir:

This letter is in reply to the Advisory Action dated January 22, 2010, in which applicant has been advised to file an amendment with all the claims (1-15) and follow the guidelines of 37 CFR 1.173.

1. The explanation for the term of "spatial interference effect":

In fact, the term of "spatial interference effect" is not an extremely broad phrase, but is more formal, professional and precise in laser physics than the term of "spatial hole burning effect". The relevant description can be found in some professional laser books, such as the book of "LASERS" written by Siegman.

In the document of "Amendments to the Specification" submitted on January 22, 2008, the term of "spatial interference effect" has been mentioned twice.

With the section 1, in the first paragraph of the document regarding to "ABSTRACT", it is pointed out in "Explanation for the Change" that "All changes made here coincide with the relevant changes in claims. The term of 'spatial interference effect' to replace the term of 'spatial hole-burning effect' will be more precise in laser physics."

With the section 4, it is pointed out in "Explanation for the Change" that "For a standing-wave laser cavity there always exists standing-wave patterns in the optical intensity. The interaction between those patterns and laser gain medium always produces spatial interference (hole-burning) effect."

2. Amendment To Claim 10:

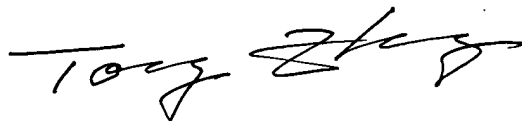
In claim 10 step 4: After "said end mirrors" adding "so as to promote single longitudinal mode operation".

Finally, applicant respectfully requests the examiner to remember to allow entering the document of "Amendments to the Specification" resubmitted on January 22, 2008, including the amendment for the TITLE in the printed patent.

Please let applicant to submit the following ~~four~~ documents along with this letter, applicant respectfully requests the examiner to allow entering them.

- 1) Supplemental Oath/Declaration.
- 2) Status of claims and support for claim changes, including reason for patent.
- 3) The clean version of the set of the pending claims 1-15 after the current amendment for claim 10. (16 pages)
- 4) An amendment paper of "Changes of Claims Shown by Markings". (16 pages)

Respectfully submitted,



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